

## ABSTRACT OF THE DISCLOSURE

A pressure support system and method of treating disordered breathing that optimizes the pressure delivered to the patient to treat the disordered breathing while minimizing the delivered pressure for patient comfort. The controller in the pressure support system operates as a set of prioritized control layers, wherein each control layer competes for control of the pressure generating system to implement a unique pressure control process. The pressure support system also controls the pressure provided to the patient based on the variability of the monitored data and a trend analysis of this data, including an indication of the skewness of the patient's inspiratory waveform.